AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

Claim 1 **(cancelled)**.

Claim 2 **(previously presented):** The intracorporeal medical device of claim 29, wherein the loops are moveable to reposition relative to each other as the tubular structure is bent.

Claim 3 **(previously presented):** The intracorporeal medical device of claim 29, wherein the bonding point is at one end of the support layer and the remaining portion of the support layer is the free portion.

Claim 4 **(previously presented):** The intracorporeal medical device of claim 29, wherein the structure is flexible around a .75 to 1.50 radius object without kinking.

Claim 5 **(previously presented):** The intracorporeal medical device of claim 29, wherein:

the overlying layer is formed as a thermally shrinkable sheath having a plurality of etches on at least its interior surface,

wherein the sheath encases and contacts the support layer and the support layer and sheath are slippable relative to one another along the free portion.

Claim 6 **(previously presented):** The intracorporeal medical device of claim 5, wherein the sheath comprises a polytetrafluoroethylene material.

Claim 7 **(previously presented):** The intracorporeal medical device of claim 6, wherein the sheath comprises PTFE, Teflon®, FEP and/or PFA.

Claim 8 **(currently amended):** The intracorporeal medical device of claim 29, wherein the support layer includes the contiguous coil element, and the contiguous coil element comprises ~~comprised of~~ a wire and a plurality of gaps between each loop, the gaps being of sufficient size to resist kinking of the tubular structure.

Claim 9 **(previously presented):** The intracorporeal medical device of claim 8, wherein the length of each gap is about 10-200 percent of the width of the wire.

Claim 10 **(previously presented):** The intracorporeal medical device of claim 8, wherein the structure is flexible around a .25 to .50 radius object without kinking.

Claim 11 **(previously presented):** The intracorporeal medical device of claim 29, wherein:

the overlying layer is formed as a thermally shrinkable sheath having a plurality of etches on at least its interior surface, the sheath encasing at least a portion of the support layer by heat-reduction of 25 percent or less of an original diameter of the sheath.

Claim 12 **(previously presented):** The intracorporeal medical device of claim 11, wherein the sheath comprises a polytetrafluoroethylene material.

Claim 13 **(previously presented):** The intracorporeal medical device of claim 12, wherein the sheath comprises PTFE, Teflon®, FEP and/or PFA.

Claim 14 **(currently amended):** The intracorporeal medical device of claim 13, wherein the support layer includes the contiguous coil element, and the contiguous coil element comprises ~~comprised of~~ a wire and a plurality of gaps between each loop, the gaps being of sufficient size to resist kinking of the tubular structure.

Claim 15 **(previously presented):** The intracorporeal medical device of claim 14, wherein the length of each gap is about 10-200 percent of the width of the wire.

Claim 16 **(previously presented):** The intracorporeal medical device of claim 10, wherein the sheath is bonded to the support layer at a bonding point located at one end of the sheath and the sheath is capable of slipping along the support layer as the tubular structure is bent.

Claim 17 **(previously presented):** The intracorporeal medical device of claim 16, wherein the structure is flexible around a .25 to .50 radius object without kinking.

Claim 18 **(cancelled).**

Claim 19 **(previously presented):** The intracorporeal medical device of claim 29, wherein at least a portion of the support layer includes gaps between each loop of the coiled element, the gaps being of sufficient size to resist kinking of the tubular structure.

Claim 20 **(cancelled).**

Claim 21 **(previously presented):** The intracorporeal medical device of claim 29, further comprising a drive system and a control system to direct rotation of the drive shaft.

Claims 22-26 **(cancelled).**

Claim 27 **(previously presented):** The intracorporeal medical device of claim 29, wherein the operating head comprises a cutter.

Claim 28 **(previously presented):** The intracorporeal medical device of claim 29, wherein the catheter comprises a proximal section having the least flexibility, a mid section and a distal section having the most flexibility and the distal section comprises the tubular structure.

Claim 29 **(currently amended):** An intracorporeal medical device comprising:

(a) an operating head;

(b) a catheter comprising a tubular structure, the tubular structure comprising:

an overlying layer and a support layer defining an internal lumen, wherein the support layer comprises a contiguous coil element, a braid element or a weave element including a plurality of loops, the support layer being attached to the overlying layer at a bonding point and not attached to the overlying layer along a free portion and wherein the support layer contacts the overlying layer along the length of the free portion, whereby the support layer is slippable relative to the overlying layer along the free portion when the tubular structure is bent; and

(c) a drive shaft extending within, and rotatable and translatable within, the internal lumen of the catheter.

Claim 30 **(previously presented):** The intracorporeal medical device of claim 29, wherein the support layer of the tubular structure is welded to the operating head.

Claim 31 **(previously presented):** The intracorporeal medical device of claim 29, wherein the support layer incorporates a less flexible support element at or near the bonding point.

Claim 32 **(previously presented):** The intracorporeal medical device of claim 5, wherein etches are provided on interior and exterior surfaces of the sheath.

Claim 33 **(previously presented):** The intracorporeal medical device of claim 5, wherein etches are provided at discrete portions of the tubular structure.

Claim 34 **(previously presented):** The intracorporeal medical device of claim 5, wherein etches are provided across the entire length of the sheath surface.

Claim 35 **(previously presented):** The intracorporeal medical device of claim 28, wherein the mid section includes a less flexible area that does not incorporate a support layer.